RESEARCH FUNDING AT

ALBERTA UNIVERSITIES

2003/2004 REPORT

December 2004

UNIVERSITY RESEARCH AND
STRATEGIC INVESTMENTS BRANCH

Alberta
INNOVATION AND SCIENCE

105-06616/

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Introduction
University Research in Alberta

Unleashing Innovation is a key pillar in the Government of Alberta's 20-Year Strategic Plan to fulfill the GOA vision to create "*a vibrant and prosperous province where Albertans enjoy a superior quality of life and are confident about the future for themselves and their children.*" Unleashing innovation requires the use of knowledge and technology to invigorate our traditional economic strengths and to create new technologies, positioning Alberta as a world leader in innovation, research, development and commercialization of new ideas.

Innovation and Science is meeting the opportunities and challenges presented by the Alberta 20-Year Strategic Plan through Goal 2 of the Innovation and Science Business Plan which is: *In collaboration with universities and other research institutions, build the capability and capacity of Alberta's research system to achieve critical mass in areas of strategic priority.* The strategies pursued by Innovation and Science to achieve this goal are focused on investing in people, investing in targeted research infrastructure and fostering innovation through encouraging greater investments in research by other sectors. These strategies, in cooperation with the existing and emerging excellence at Alberta universities, are leading to internationally recognized research capabilities in areas of strategic priority for long-term growth, supported by a skilled workforce to foster research and innovation.

The research conducted at Alberta's universities is a fundamental element of Alberta's innovation system and our consequent success in the global knowledge economy. University research activities directly result in the creation and implementation of new knowledge, a key factor in economic success. Universities foster the dissemination and transfer of new knowledge through strong linkages with the strategic clusters driving Alberta's economy. Through the university educational experience, research contributes to the development of highly qualified personnel, including the next generation of university researchers and knowledge workers for industry.

Alberta universities rank among the best in Canada in terms of sponsored research revenue, an indicator of research excellence and capacity. It has been demonstrated that there is a clear link between building research capacity, through quality faculty and equipment, and increasing research revenues from all funding sources. Making world-class equipment available in the province's research institutions has proven to be an effective tool for recruiting and retaining key researchers. High quality faculty with leading edge equipment, in turn improve the quality of the institution's research and educational programs, and the resultant economic success and quality of life that Alberta enjoys.

This report summarizes sponsored research revenues at Alberta Universities. Research revenues are devoted to the operating and infrastructure costs of research activities. Sponsored research revenues are those that are received outside of the regular university operating grant and include both research grants and research contracts.

Financial Note: The data in this report is provided directly by the universities and is not from audited financial schedules.

Provincial Government Support of University Research

Research at Alberta universities is supported in part by the provincial government through Alberta Innovation and Science, the Alberta Science and Research Authority (ASRA), Alberta Advanced Education, and Alberta Infrastructure and Transportation, as well as through the Alberta Heritage Foundation for Medical Research and the recently established Alberta Ingenuity Fund (Alberta Heritage Foundation for Science and Engineering Research).

Research funding provided by Innovation and Science and ASRA programs supports specific research projects and funds widely-applicable university research infrastructure. The intent is to build the capacity and capability required in areas of strategic priority to Alberta. There is a clear link between funding general infrastructure and attracting additional external funding for research activities (i.e., as better infrastructure is put in place, the potential to attract funding for research activities increases). Alberta Infrastructure and Transportation provides funds for the large capital buildings and related capital infrastructure required for the university research system.

Operating Grant
Alberta Advanced Education (formerly Learning) provides an operating grant to the universities, which includes funding for teaching, research and administrative activities. It is estimated that up to 40 percent of the operating grant goes directly or indirectly towards supporting research activities. The 2003/04 university operating grants to Alberta's four universities totalled $585,761,346.

Performance Envelope
The research component of Alberta Advanced Education's Performance Envelope provides additional funding based on the extent to which Alberta universities meet agreed upon research targets. These targets are a subset of the department's Key Performance Indicators (KPIs) which are specifically dedicated to research. In 2003/04, Alberta Universities received $5,649,876 from the Performance Envelope, a portion of which is related to research activities.

Alberta Science and Research Investments Program (ASRIP)
The Alberta Science and Research Investments Program (ASRIP) is a competitive funding program that supports selected science and research initiatives of strategic importance to Alberta. ASRIP is available for science and research initiatives under two distinct funding streams: Research Infrastructure (RI) and Enabling Research Application and Technology Transfer (ERATT). The 2003 ASRIP competition approved a total of $22.6 million for 16 projects: four ERATT projects received $1.2 million, and $21.4 million was approved for 12 RI projects. This edition's Table 3 provides a complete listing of proposals approved under the 2003 ASRIP competition.

Funding allocated to the universities from the ASRIP program is reported on a modified cash flow basis, thus funds are not reported until all partner funding is secured. Coupled with the fact that the majority of funded projects are multi-year and receive funding in installments, this means that funding approved in the 2001/02 and 2002/03 ASRIP competitions will continue to be reflected in future year reports.

Small Equipment Grants Program
The Small Equipment Grants Program provides targeted support for researchers with submissions to the Canada Foundation for Innovation New Opportunities Program. The program is targeted to assist Alberta universities' efforts to recruit and retain key researchers in the priority areas of life sciences, energy and information and communication technology (ICT). ASRA funding leverages federal, private sector and university sources to enable the purchase of modern equipment for talented recruits. The program was formalized in 2003-04 and began providing funds to researchers in 2004-05.

Alberta Energy Research Institute University Research Program
Up to 2004, the Alberta Energy Research Institute (AERI) has invested in university research primarily through the Core University Research in Sustainable Energy (COURSE) program. The COURSE program, formerly known as Coordination of University Research for Synergy and Effectiveness, provides a link between the energy industry and universities to ensure that basic research in strategic areas is funded. The 2004 COURSE competition provided funding for three projects at the University of Alberta for $728,521 and four projects at the University of Calgary for $887,380. In addition to COURSE funding, AERI also sponsors three chairs at the University of Alberta ($1,307,500 over five years), as well as several projects at the University of Calgary ($897,900 over three years), and one project at the University of Toronto ($453,600 over three years).

From 2005 onwards, the COURSE program will be integrated into the business plans for the EnergyINet Innovation Programs. Total AERI funding for university research will remain at the same level of approximately $3 million per year, and will be targeted towards the areas of Clean Coal/Carbon, Improved Recovery, Upgrading, CO_2 Management, Water Management, and Alternative and Renewable Energy.

Agriculture Funding Consortium
Through the competitive Agricultural Research Funding Program, in 2003/04, the Alberta Agricultural Research Institute (AARI) approved $3.86 million to fund agricultural research and development at the University of Alberta, the University of Calgary, and the University of Lethbridge. This funding was in strategic priority areas including beef genomics, swine reproduction, integrated crop and pest management, food safety practices, animal welfare, livestock production practices, and value-added processing. The University of Alberta received $3.37 million, the University of Calgary received $274,000, and the University of Lethbridge received $212,000. The AARI investment in these initiatives was leveraged significantly through the Funding Consortium members, other public funding sources, and industry.

Alberta Informatics Circle of Research Excellence (iCORE)
The mandate of the Alberta Informatics Circle of Research Excellence (iCORE) is to attract and grow a critical mass of outstanding researchers in the fields of computer science, computer engineering, physics, mathematics and other ICT-related disciplines. Building on existing excellence in Alberta's universities, iCORE forms and supports strong scientific teams in ICT. In 2003/04 iCORE provided $8.7 million in support of 17 Chairs and Professors, 59 faculty researchers and 269 graduate students and post-doctoral fellows. An additional 213 graduate students held active iCORE Graduate Student Scholarships. Source: iCORE Inc. Performance Measures 2004.

Alberta Heritage Foundation for Medical Research (AHFMR)
Established by the Government of Alberta in 1980, the Alberta Heritage Foundation for Medical Research (AHFMR) supports biomedical and health research at Alberta universities, affiliated institutions, and other medical and technology-related institutions. The AHFMR's support and leadership has resulted in millions of dollars of support to Alberta universities and research hospitals and has enabled Alberta to become one of the top ten medical research centres in North America. The AHFMR's contributions are included in this report (e.g., p. 11).

Alberta Ingenuity Fund (Alberta Heritage Foundation for Science and Engineering Research)
Modeled after the Alberta Heritage Foundation for Medical Research, the Alberta Ingenuity Fund was established in 2000 with an endowment fund of $500 million to support a balanced, long-term program of science and engineering research in Alberta. The AIF's contributions are outlined on p. 12.

Executive Summary of Statistics

Sponsored research funding to Alberta universities increased by 34 percent in 2003/04. In the long-term, sponsored research funding in Alberta shows a dramatic increase, tripling in the past seven years to $583.7 million in 2003/04. This large increase in funding reflects:

1. The introduction of new programs and expansion of existing programs, at both the federal and provincial levels, aimed at strategically investing in university research.
2. Increased capacity and capabilities at Alberta universities.
3. Investment from Alberta Infrastructure and Transportation for the construction of Health Research Facilities at the University of Alberta and University of Calgary.

In the past five years, provincial government funding for university research has doubled, reaching $196.4 million, a firm indication of Alberta's commitment towards science and innovation. The dramatic increase in provincial contributions in the last year can be attributed, in part, to Alberta Infrastructure and Transportation investments of more than $70 million to capital projects at Alberta universities.

Federal government funding to Alberta universities has almost doubled in the last five-year period, to $245.5 million in 2003/04. This is primarily the result of increased provincial commitments and successes in leveraging federal programs such as the Canada Foundation for Innovation. Other increases in federal support are the result of the reintroduction of the Indirect Costs Program, the Canada Research Chairs Program, and expanded budgets for the federal granting councils (the Natural Sciences and Engineering Research Council, the Social Sciences and Humanities Research Council and the Canadian Institutes for Health Research).

The level of sponsored research funding provided to universities by non-governmental sources, primarily industry and non-profit organizations, increased from $100.5 million in 2002/03 to $125.1 million in 2003/04. Overall, non-governmental research funding has increased by more than 50 percent in the past five years.

Other indicators of the impacts of university research on industry are the application and transferability of research to industry. In 2003/04, with the help of TEC Edmonton at the University of Alberta, University Technologies International Inc. at the University of Calgary, and the Technology Transfer Office at the University of Lethbridge, 199 patents were filed, 105 patents were issued, three start up companies were formed, and $4.98 million in licensing revenues were received.

The distribution of total sponsored research funding from all sources follows a fairly consistent historical pattern, with the largest proportion of funding going towards the faculties of medicine, science and engineering at both the Universities of Alberta and Calgary. However, it should be noted that, although funding amounts vary by discipline, the intensity of research in faculties is not necessarily commensurate with monetary allocations to faculties. Amongst the four institutions, an average of 8.5 percent of sponsored research revenues were allocated to support and administration.

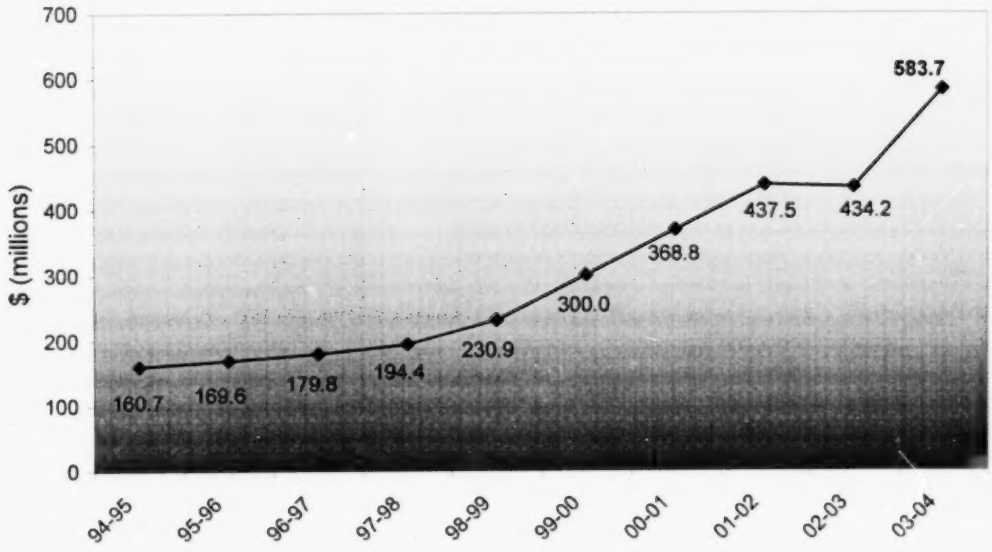
The Alberta Heritage Foundation for Medical Research has awarded $223.8 million over the past five years to Alberta's medical faculties and teaching hospitals, enabling Alberta to become one of the top ten medical research centres in North America.

The Alberta Ingenuity Fund increased its contributions in support of science and engineering research activities and centres of excellence at Alberta universities from $276,000 in its first year to $7.4 million in 2003/04.

Note: Seven-year comparisons are designed to illustrate the change in sponsored research associated with the introduction of the Canada Foundation for Innovation and associated provincial infrastructure programs.

Total Sponsored Research Revenue to Alberta Universities 1994/95 to 2003/04

FIGURE 1



Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the Vice-President, Academic.

- In 2003/04, Alberta's four universities received $583.7 million in sponsored research funding, an increase from 2002/03 of 34 percent. The increase in funding can be attributed to substantial capital investments by Alberta Infrastructure and Transportation, the reintroduction of the federal Indirect Costs Program, the continuing influx of funds from previous CFI competitions, and an increase in industry contributions.
- Over the past five years, sponsored research funding has almost doubled, with an average growth rate of 21 percent per year.
- In the last five years, Alberta universities have received $2.1 billion in sponsored research funding.

Fiscal Year	Amount of Funding	Increase from previous year
2003/04	$583.7 million	34.4 %
2002/03	$434.2 million	-0.7%
2001/02	$437.5 million	18.6%
2000/01	$368.8 million	22.9%
1999/00	$300.0 million	29.9%

Total Sponsored Research Revenue to Alberta Universities 1994/95 to 2003/04

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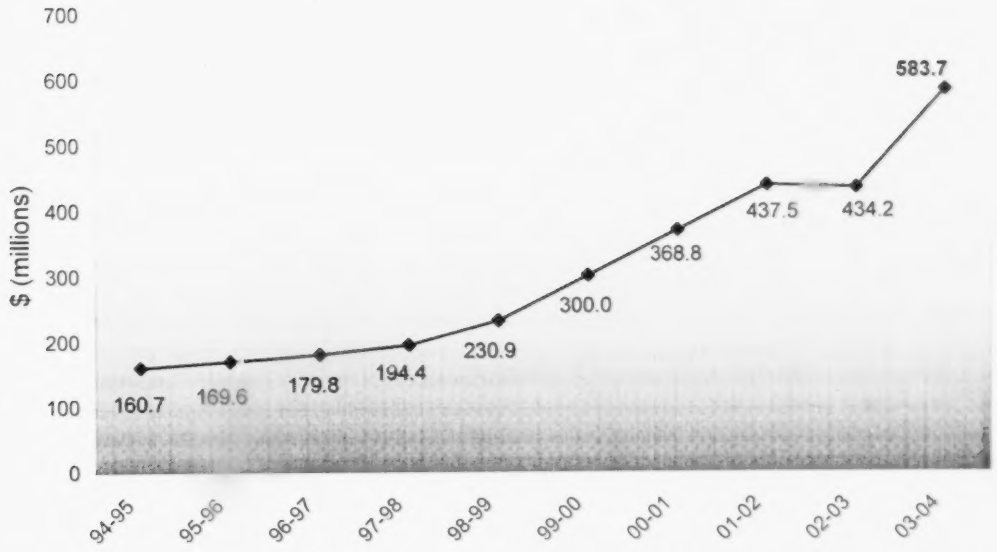

Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the Vice-President, Academic.

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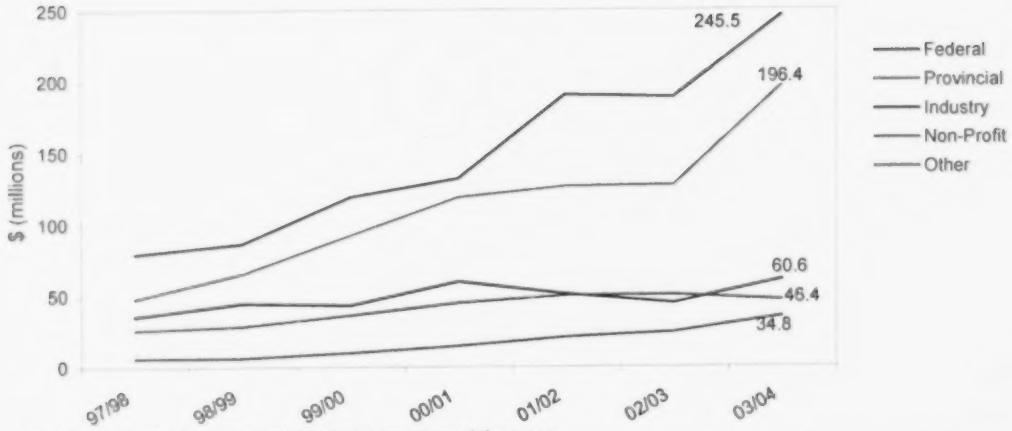
Total Sponsored Research Revenue by Source 1997/98 to 2003/04

FIGURE 2A



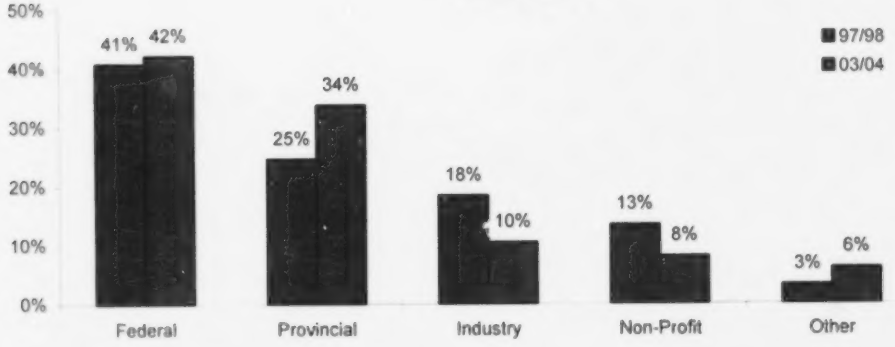
* 'Other' includes both other governmental and non-governmental sources.
Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the VP, Academic.

- Funding to universities has been steadily increasing from federal and provincial sources over the past seven years. Though both are subject to annual variation, the ten-year view shows funding from industry almost tripling and funding from the non-profit sector almost doubling.

- Funding from provincial sources has more than doubled over five years, rising from $92.0 million in 1999/00 to $196.4 million in 2003/04. The one-year increase in provincial funding is primarily a result of investments in capital projects at the University of Alberta and the University of Calgary and continuing research infrastructure investments in projects such as the National Institute for Nanotechnology. Federal sources have increased by 106 percent in that same time period, from $118.9 million in 1999/00 to $245.5 million in 2003/04.

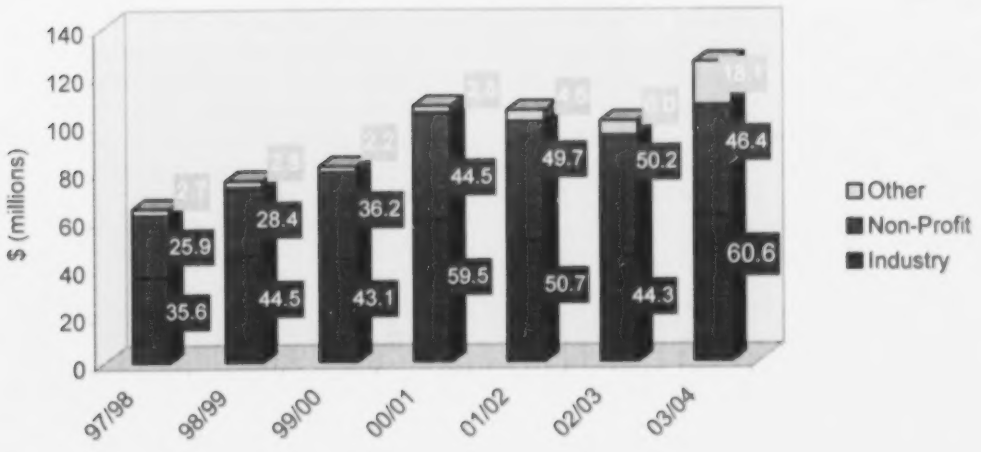
- Figure 2B shows how funding from various sources has changed as a percentage of total funding over a seven-year period. Funding from provincial sources has increased from 25 percent to 34 percent of total sponsored research funding. The proportion of federal funding has remained relatively stable. Though funding from industry and non-profits has increased overall, these sectors have not matched the investment pace set by government.

FIGURE 2B



Non-Governmental Support for Sponsored Research 1997/98 to 2003/04

FIGURE 3

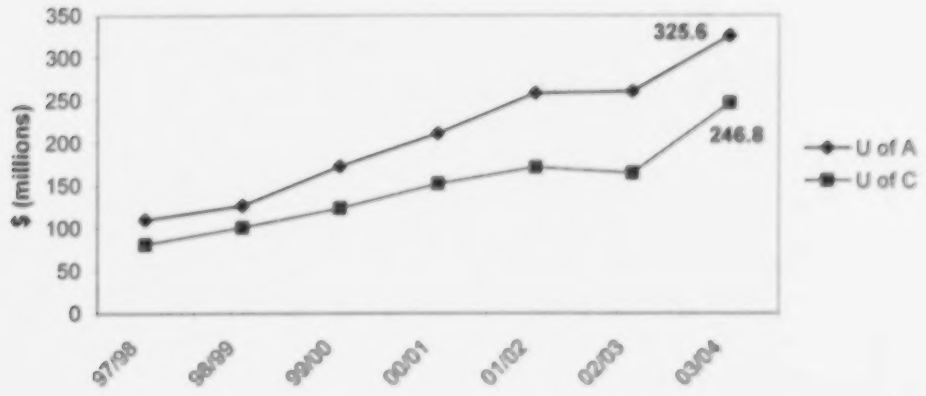


* 'Other' includes only other non-governmental sources.
Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the VP, Academic.

- The total level of funding provided by non-governmental sources to Alberta universities increased from $100.5 million in 2002/03 to $125.1 million in 2003/04.
- In 2003/04, industry investment increased by 36.8 percent from the previous year. Similar to other non-governmental sectors, industry funding shows a strong upward trend in the long-term, increasing from $20.5 million to $60.6 million over ten years.
- Although non-profit investment decreased slightly from the previous year, this sector has shown a strong upward trend in its sponsored research funding to universities, almost doubling over the last ten years.

Sponsored Research Revenue at Individual Universities 1997/98 to 2003/04

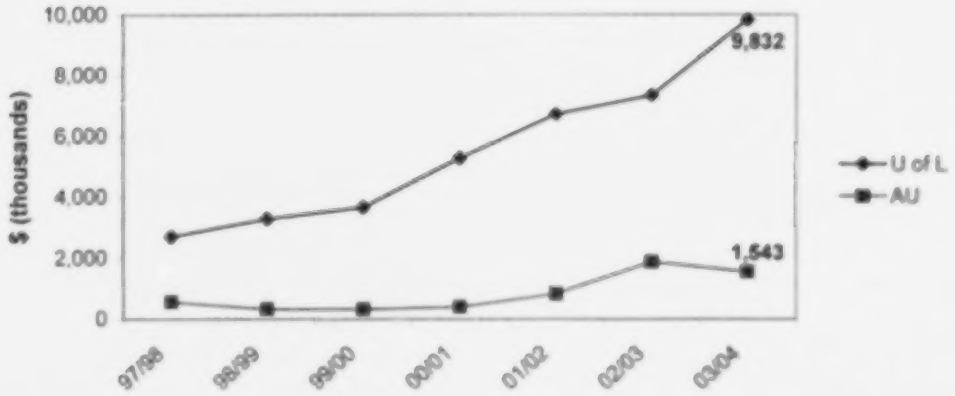
FIGURE 4A



Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services.

- In 2003/04, total sponsored research funding to the University of Alberta was $325.6 million, almost triple the funding in 1997/98 when it received $109.9 million.
- In 2003/04, the University of Calgary received $246.8 million in sponsored research funding, triple the $81.2 million received in 1997/98.

FIGURE 4B

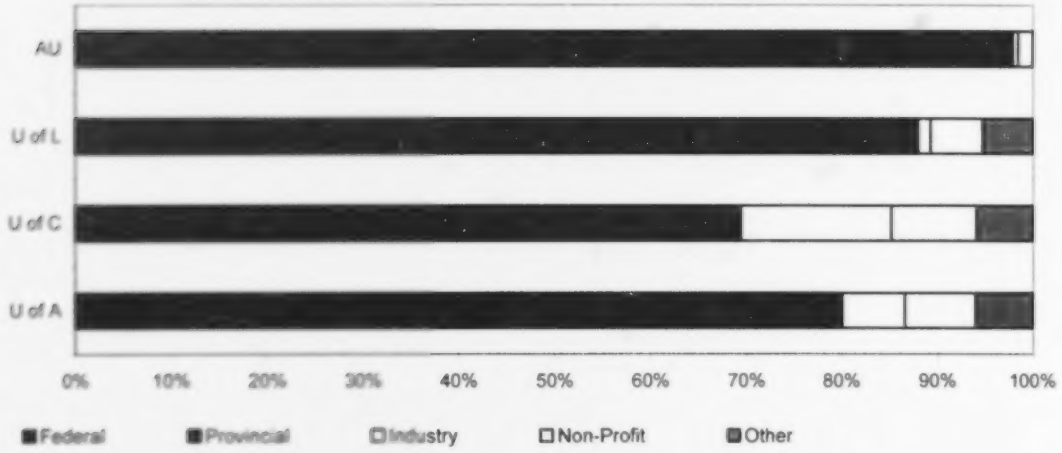


Sources: The University of Lethbridge: Financial Services; Athabasca University: Office of the Vice-President, Academic.

- In 2003-04, sponsored research funding at the University of Lethbridge was $9.8 million, more than triple the $2.7 million received in 1997/98. Government support of the Canadian Centre for Behavioral Neuroscience has been a key contributor in the attraction of leading researchers and associated increases in sponsored research revenue.
- Athabasca University received $1.5 million for sponsored research in 2003/04, more than doubling in the last seven years.

Sponsored Research Revenue at Individual Universities by Source 2003/04

FIGURE 5



Other includes governmental and non-governmental funds
Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the Vice-President, Academic.

- In 2003/04, the federal government was the largest source of funding to all Alberta universities, followed by provincial government sources.

- The University of Alberta received over 40 percent of its sponsored research funding from federal government sources. Over the past seven years, funding from the federal government has almost tripled, from $50.6 million in 1997/98 to $141.1 million in 2003/04. Funding from industry has seen a 30 percent increase since 1997/98. Provincial government funding has seen the largest jump, increasing by 4.5 times, from $26 million in 1997/98 to $119.5 million in 2003/04.

- Funding to the University of Calgary from provincial sources was $74.6 million in 2003/04, almost doubling from the previous year. Federal government funding increased 3.5 times in the past seven years, from $27.7 million in 1997/98 to $96.6 million in 2003/04. Industry funding to the University of Calgary has more than doubled in seven years, increasing from $19.0 million in 1997/98 to $39.0 million in 2003/04.

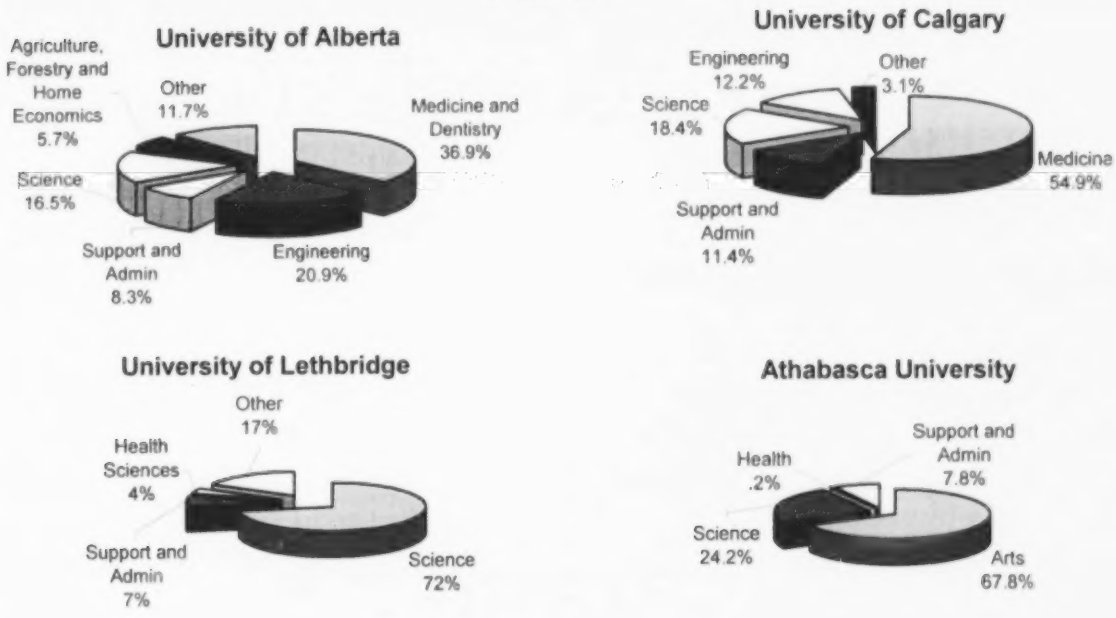
- Increases in provincial funding at the Universities of Alberta and Calgary from 2002/03 to 2003/04 are, in part, a result of significant capital building investments made by Alberta Infrastructure and Transportation.

- Funding from federal sources to the University of Lethbridge in 2003/04 was $6.3 million, more than tripling in the last seven years. Funding from provincial sources has increased almost 150 percent over the same seven-year period. Funding from industry decreased 20 percent from the previous year, but shows a long-term upward trend, increasing 120 percent over the last seven years.

- Athabasca University received 97 percent of its sponsored research revenue from the federal government. Funding from federal sources has increased more than three fold since 1997/98 and industry funding has more than doubled over the same seven year period.

Distribution of Total Sponsored Research Revenue Within Alberta Universities 2003/04

FIGURE 6



Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the VP, Academic.

- At the University of Alberta, the Faculty of Medicine secured the largest proportion of research funding at 36.9 percent. The Faculty of Engineering obtained 20.9 percent and the Faculty of Science obtained 16.5 percent of funding in 2003/04.

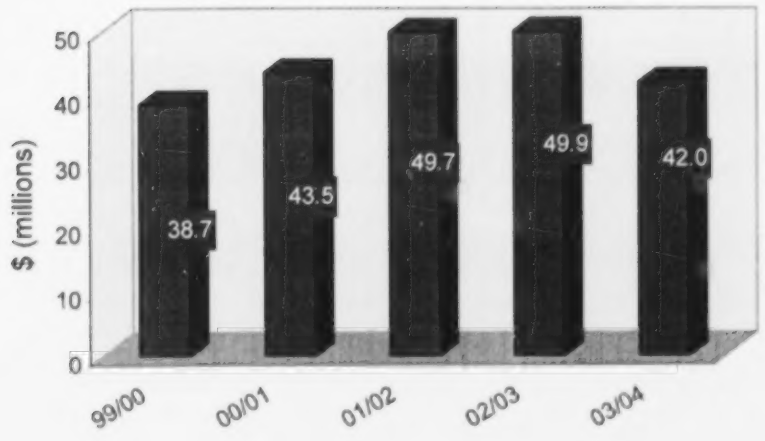
- The University of Calgary's Faculty of Medicine accounted for almost 55 percent of 2003/04 sponsored research funding to the university. The Faculty of Science obtained 18.4 percent and the Faculty of Engineering obtained 12.2 percent of funding in 2003/04.

- The proportional allocation of research funding to faculties at the University of Lethbridge follows a consistent historical pattern, with 72 percent of funding being secured by the Faculty of Science in 2003/04. Athabasca University is also consistent with the majority of sponsored research revenue, 67.8 percent, secured by the Faculty of Arts.

Note: Funding amounts vary by discipline, but the intensity of research in faculties is not necessarily commensurate with monetary allocations to faculties. For example, research activities in the Arts, Humanities and Social Sciences tend to be less costly to conduct; therefore, the intensity of such research is not necessarily reflected in monetary terms.

Alberta Heritage Foundation for Medical Research (AHFMR)
1999/00 to 2003/04

FIGURE 7



Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services.

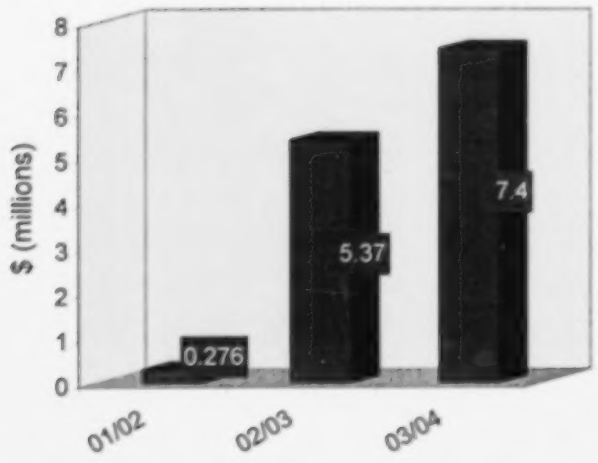
- The decline in research investments from $49.9 million in 2002/03 to $42.0 million in 2003/04 is a direct result of the AHFMR being an endowment-based organization. As the value of the endowment decreases in response to general financial markets, the AHFMR must reduce its expenditures accordingly.

- In the last five years, AHFMR support to Alberta's universities has increased by 8.5 percent, to $42.0 million from the 1999/00 level of $38.7 million.

- The AHFMR has provided $223.8 million in sponsored research to Alberta's universities over the past five years.

Alberta Ingenuity Fund (AIF)
2001/02 to 2003/04

FIGURE 8



Sources: University of Alberta: Research Services Office; the University of Calgary: Financial Services; The University of Lethbridge: Financial Services.

- The Alberta Ingenuity Fund was established in 2000 and is just beginning to move forward with funding decisions.
- In 2003/04 the Alberta Ingenuity Fund contributed $7.4 million in sponsored research funding to Alberta universities.

Commercialization of Research 2003/04

The University of Alberta and the University of Calgary generate funding through the activities of their respective technology transfer organizations, TEC Edmonton for the University of Alberta, University Technologies International Inc. for the University of Calgary, and the Technology Transfer Office for the University of Lethbridge. The impact of university research is reflected in the successes of these organizations through the growing number of licenses generating revenue, royalty revenues and spin-off companies. These successes give an indication of the impacts of university research as it is applied and transferred to industry and society.

The University of Alberta

The University of Alberta experienced the following technology commercialization activity in 2003/04:

- 97* reports of new inventions;
- 144* patent applications filed;
- 57* patents issued from applications filed in previous years;
- 24 licenses/options to use technologies secured;
- three new spin-off companies created;
- $1.1 million in licensing revenues received; and
- 18 new products or technologies licensed.

**Note: includes commercialization activity at the University of Alberta undertaken by TRLabs.*

At the end of the 2003/04 fiscal year the University of Alberta held equity in 38 companies with an estimated value of $35 million. There were 70 active spin-off companies collectively employing more than 1,000 highly skilled workers. Seven companies are publicly traded.

Source: "2003-04 Annual Report, University of Alberta Technology Transfer, 2004," produced by TEC Edmonton: the technology transfer unit for the University of Alberta

The University of Calgary

The University of Calgary's wholly owned commercialization company, University Technologies International Inc. (UTI), continues to enable the University of Calgary to rank among the top Canadian universities generating royalty revenues from licensed technologies. In 2003/04, UTI received $3.88 million in licensing revenues.

In addition, UTI attracted $406,000 in Product Development Agreements to the University of Calgary and contributed $45,000 directly to post-graduate fellowships.

Also in 2003/04 UTI had:

- 24 commercialization deals executed;
- 98 disclosures of new technology;
- no new start-up companies were created (resources were concentrated on existing startups at critical development stages);
- 109 licenses generating revenue from a portfolio of more than 600 patents; and
- 54 patent applications filed and 47 issued.

Source: UTI, University of Calgary.

The University of Lethbridge

With the help of the Office of Research Services, the Technology Transfer Office at the University of Lethbridge began operations in November 2002. The Technology Transfer Office has implemented a formal disclosure process and a tracking system for patents. It is currently developing a framework for institutional policies and templates for research agreements. The Technology Transfer Office provides the services required to assist researchers with intellectual property management, technology transfer, commercialization and company start up activities.

For 2003/2004:

- 16 disclosures of new inventions;
- 1 patent application filed;
- 1 patent issued from earlier applications; and
- 12 licenses and options to technologies.

Total to date:

- 24 disclosures of new inventions;
- 14 patent applications filed;
- 9 patents issued from earlier applications; and
- 13 licenses and options to technologies.

Source: Technology Transfer Office, University of Lethbridge.

Research Revenue from Investment Earnings, Networks of Centres of Excellence and Clinical Trials 2003/04

Reporting Standards

- Alberta universities follow common approaches to most of their reporting. However, there are a number of reporting differences between universities, including investment earnings (primarily endowment) allocated to research expenditure, Networks of Centres of Excellence (NCE) revenue and clinical trials funding.

- Differing situations at the University of Alberta and the University of Calgary make reporting these three sources in the same manner particularly difficult. The explanatory notes and revenues recorded below have been included in this report to ensure that this report is as inclusive of all sponsored research revenue as possible and to allow for a comparable overview of the significant revenues derived from these three sources at the University of Alberta and the University of Calgary.

The University of Alberta

Investment Earnings from Endowments

- In 2003/04, investment earnings from endowments totaling **$24.1 M** were allocated for research spending but are not included in the Sponsored Research Revenue table.

Networks of Centres of Excellence (NCEs)

- The 2003/04 Sponsored Research Revenue Report includes **net** University of Alberta revenue (gross revenue was reported in 1997/98 and prior years). The net NCE revenue in 2003/04 was **$5.6 M**.
- This amount is understated, as the Research Revenue Schedule in the University's Financial Statements does not breakdown by organization revenue received in amounts less than $50,000. These smaller amounts are included in the "Other" category of the Sponsored Research Funding table.
- The University of Alberta is the administrative centre for the Protein Engineering Network and the Sustainable Forest Management of Network.

Clinical Trials

- Virtually all funds for clinical trials are received, held, and administered by the Capital Health Authority, with a small portion administered by the Alberta Cancer Board.
- Revenues for clinical trials reported by the Capital Health Authority and Alberta Cancer Board bring the total estimated clinical trials and related research funding for the University of Alberta to **$17.6 M** for 2003/04. This revenue is not included in the Sponsored Research Revenue table.

Source: University of Alberta: Research Services Office.

Research Revenue from Investment Earnings, Networks of Centres of Excellence and Clinical Trials 2003/04

The University of Calgary

Investment Income

- The University of Calgary allocated **$10.5** million in investment income to research activities. This allocation is included in the $246.8 million sponsored research revenues reported in Table 1 (page 17).

Networks of Centres of Excellence (NCEs)

- The University of Calgary is responsible for administering the Canadian Bacterial Diseases Network (CBDN) that provides grants to researchers at universities across Canada. Funding for the CBDN is provided by the Natural Sciences and Engineering Research Council (NSERC) and the Canadian Institutes of Health Research (CIHR).

- The **$3.2** million in 2003/04 funding received for the NCE is included in the sponsored research total.

Clinical Trials

- The University of Calgary has entered into an agreement with the Calgary Regional Health Authority with respect to the administration of industry sponsored, patient-based clinical research. Under this agreement, the researcher has the option of administering the financial resources of each individual clinical trial through the financial system of either the University or Regional Health Authority, regardless of the physical location of where the clinical trial is held. To date, the majority of these clinical trials are administered through the University's financial system.

- Total clinical trial revenue for 2003/04 is **$9.9** million and is included as sponsored research revenue.

Source: University of Calgary: Financial Services.

Table 1: Sponsored Research Revenue: Government Sources ($ 000)
2000/01 to 2003/04

Sources		Recipient	2000/01	2001/02	2002/03	2003/04
Federal Gov't	NSERC	Alberta	35,600	37,590	35,506	37,948
		Calgary	16,614	18,246	20,809	20,768
		Lethbridge	1,804	1,705	1,973	2,176
		Athabasca	8	52	37	100
	SSHRC	Alberta	5,611	19,510	7,939	8,574
		Calgary	3,662	9,515	3,444	4,458
		Lethbridge	141	201	207	485
		Athabasca	41	175	55	112
	CIHR	Alberta	23,277	30,467	33,180	37,077
		Calgary	18,914	25,927	27,167	29,784
		Lethbridge	226	222	312	390
		Athabasca	0	52	52	0
	CFI	Alberta	5,698	22,133	14,699	23,009
		Calgary	2,510	4,164	10,284	17,936
		Lethbridge	0	218	610	314
		Athabasca	0	78	227	143
	CRC	Alberta	[redacted]		8,192	10,099
		Calgary			4,425	5,375
		Lethbridge			0	300
		Athabasca			142	200
	INDIRECT COSTS	Alberta				13,354
		Calgary				8,478
		Lethbridge				912
		Athabasca				121
	OTHER	Alberta	12,597	13,030	9,144	11,024
		Calgary	4,573	6,308	8,591	9,833
		Lethbridge	359	373	597	1,720
		Athabasca	92	219	1,041	823
	Subtotal	**Alberta**	**82,783**	**122,730**	**108,660**	**141,085**
		Calgary	**46,274**	**64,160**	**74,720**	**96,632**
		Lethbridge	**2,530**	**2,719**	**3,699**	**6,297**
		Athabasca	**140**	**576**	**1,554**	**1,498**
		All	**131,727**	**190,185**	**188,633**	**245,512**
Alberta Gov't	AHFMR	Alberta	22,798	23,707	26,313	21,733
		Calgary	20,126	24,422	22,564	19,236
		Lethbridge	544	1,562	1,041	987
		Athabasca	0	0	0	0
	I&S and ASRA	Alberta	30,822	17,353	38,506	44,951
		Calgary	15,778	18,499	8,011	6,941
		Lethbridge	742	876	538	887
		Athabasca	263	114	220	3
	AIF	Alberta	[redacted]	177	3,905	5,375
		Calgary		99	1,346	1,779
		Lethbridge		0	123	244
		Athabasca		0	0	0
	OTHER	Alberta	12,279	27,725	17,316	47,408
		Calgary	14,439	11,463	6,767	46,653
		Lethbridge	711	245	418	235
		Athabasca	0	103	33	10
	Subtotal	**Alberta**	**65,899**	**68,962**	**86,040**	**119,467**
		Calgary	**50,344**	**54,483**	**38,688**	**74,609**
		Lethbridge	**1,997**	**2,683**	**2,120**	**2,353**
		Athabasca	**263**	**217**	**253**	**13**
		All	**118,503**	**126,345**	**127,101**	**196,442**
Other Gov't		Alberta	9,717	13,733	14,207	13,493
		Calgary	1,911	2,138	3,414	2,802
		Lethbridge	66	107	341	432
		Athabasca	0	0	0	0
		All	**11,694**	**15,978**	**17,962**	**16,727**
TOTAL GOVERNMENT		Alberta	158,399	205,425	208,907	274,045
		Calgary	98,527	120,781	116,822	174,043
		Lethbridge	4,593	5,509	6,160	9,082
		Athabasca	404	793	1,807	1,511
		All	**261,924**	**332,508**	**333,696**	**458,681**

Sources: University of Alberta: Research Grants Office; the University of Calgary: Financial Services; The University of Lethbridge Financial Services; Athabasca University: Office of the VP, Academic.

Table 2: Sponsored Research Revenue: All Sources ($ 000)
2000/01 to 2003/04

Sources	Recipient	2000/01	2001/02	2002/03	2003/04
Total Government	Alberta	158,399	205,425	208,907	274,045
	Calgary	98,527	120,781	116,822	174,043
	Lethbridge	4,593	5,509	6,160	9,082
	Athabasca	404	793	1,807	1,511
	All	**261,924**	***332,508**	**333,696**	****458,681**
Industry	Alberta	29,853	24,798	19,212	21,457
	Calgary	29,628	25,731	24,913	39,000
	Lethbridge	47	162	164	130
	Athabasca	4	4	34	9
	All	**59,532**	**50,695**	**44,323**	**60,596**
Non-Profit	Alberta	20,400	24,476	27,019	23,931
	Calgary	23,616	24,197	22,171	21,867
	Lethbridge	501	1,022	972	533
	Athabasca	0	28	24	23
	All	**44,517**	**49,723**	**50,186**	**46,354**
Other	Alberta	2,450	3,746	5,129	6,140
	Calgary	251	768	802	11,846
	Lethbridge	140	21	47	87
	Athabasca	0	0	3	0
	All	**2,841**	**4,535**	**5,981**	**18,073**
TOTAL	Alberta	211,102	258,445	260,267	325,573
	Calgary	152,022	171,477	164,708	246,756
	Lethbridge	5,281	6,714	7,343	9,832
	Athabasca	408	825	1,868	1,543
	All	**368,814**	**437,461**	**434,186**	**583,704**

* Includes $11.9 million for indirect costs and $21.0 million from Alberta Infrastructure to the University of Alberta and $7.3 million for indirect costs to the University of Calgary
**Includes Alberta Infrastructure contributions of $39.8 million to the University of Alberta and $37.0 million to the University of Calgary

Sources: University of Alberta: Research Grants Office, the University of Calgary: Financial Services; The University of Lethbridge: Financial Services; Athabasca University: Office of the VP, Academic.

Table 3 Alberta Research Strategic Investments Program
2003-2004

Life Sciences **ASRIP Awards: $15,224,558** *Total Project Costs: $ 97,952,670*

Prototype Implementation for the Alberta Biodiversity Monitoring Program (U of A, Stan Boutin)
ERATT Award: $600,000 Total Project Cost: $4,136,000

Toward Developing a Vaccine that Inhibits Engorgement of Ticks (U of A, Reuben Kaufman)
ERATT Award: $78,273 Total Project Cost: $199,095

Centre of Excellence for Gastrointestinal Inflammation and Immunity Research (CEGIIR) (U of A, Richard Fedorak) *RI Award: $4,605,013* Total Project Cost: $20,508,807

Cardiovascular Translational Research Centre (U of A, Gary Lopaschuk)
RI Award: $2,500,000 Total Project Cost: $14,737,990

Nanophotonics Microscopy Unit (U of A, Al Meldrum)
RI Award: $152,000 Total Project Cost: $380,000

Agricultural Genomics and Proteomics Centre (U of A, Stephen Moore)
RI Award: $1,100,000 Total Project Cost: $3,224,821

Field Facility to Support Ecosystem Management Emulating Natural Disturbances (U of A, John Spence)
RI Award: $223,740 Total Project Cost: $567,040

Canadian Pain Trials Network (U of C, Paul Taenzer)
RI Award: $22,507 Total Project Cost: $3,026,659

Institute for Inflammatory Diseases: A common focus for the improvement of health (U of C, Paul Kubes)
RI Award: $2,009,943 Total Project Cost: $18,629,196

Project neuroARM: MR compatible image guided robot for microsurgery (U of C, Garnette Sutherland)
RI Award: $3,000,000 Total Project Cost: $30,000,357

Brain, Behaviour and Cognitive Science Imaging Facility (U of L, Bryan Kolb)
RI Award: $933,082 Total Project Cost: $2,542,705

Energy **ASRIP Awards: $1,829,669** *Total Project Costs: $ 7,904,034*

Innovative Approaches to Modulating Microbial Biofilms in Alberta's Oil and Gas Industry (U of C, Howard Ceri) *ERATT Award: $400,000* Total Project Cost: $2,032,458

Oil Sands and Coal Interfacial Engineering Facility (U of A Jacob Masliyah)
RI Award: $1,429,669 Total Project Cost: $5,871,576

Multidisciplinary **ASRIP Awards: $5,522,980** *Total Project Costs: $ 19,467,392*

Laser Speckle Blood Flow Imaging: Technology Transfer (U of C, Robert C. Bray)
ERATT Award: $129,262 Total Project Cost: $324,896

Integrated Nanosytems Research Facility (U of A, David Lynch)
RI Award: $4,883,118 Total Project Cost: $14,727,796

Project to Restore Movement (U of A, Richard Stein)
RI Award: $ 510,600 Total Project Cost: $4,414,700

Total ERATT Investments **ASRIP Awards: $ 1,207,535** *Total Project Costs: $ 6,692,449*
Total RI Investments **ASRIP Awards: $21,369,672** *Total Project Costs: $118,631,647*

Total ASRIP Investments **ASRIP Awards: $22,577,207** *Total Project Costs: $125,324,096*